

REMARKS

Amendments

Claims 1-17 have been canceled and replaced by new claims 18 and 20-35, respectively. These new claims are in the form of method of use claims as opposed to "use" claims, and independent claim 18 is in the form of a Jepson claim. Also, claim 25, which corresponds to prior claim 7, recites that the contrast agent is integrated into a macromolecular structure. See, e.g., the disclosure bridging pages 7-8. The phrase "highly-molecular structure" is not recited in claim 25. New claim 26 recites, inter alia, that the contrast agent is in a form whereby it is associated with another molecule. Also, claim 26 recites that the contrast agent can be, inter alia, in the form of emulsion droplets. See, e.g., the disclosure at the top of page 8. Claim 26 does not recite "molecule associates."

New claim 19 is supported by the disclosure bridging pages 6-7 and original claims 2-5. New claim 36 is supported by the disclosure at the top of page 6 and new claim 37 is supported by the disclosure at the bottom of page 6.

Rejection of Claims 7-8 Under 35 U.S.C. §112, 2nd paragraph

As discussed above, claims 7-8 have been canceled and replaced by new claims 25-26. These new claims do not use the phrases "highly-molecular structures" or "molecule associates." Withdrawal of the rejection of claims 7-8 under 35 U.S.C. §112 is respectfully requested.

Rejection of Claims 1-17 Under 35 U.S.C. §112, 2nd paragraph

Claims 1-17 have been replaced by method of use claims which clearly recite active positive steps, for example, administering a contrast agent. Withdrawal of the rejection of claims 1-17 under 35 U.S.C. §112 is respectfully requested.

Rejection of Claims 1-17 Under 35 U.S.C. §101

Use claims 1-17 have been replaced by method of use claims which clearly recite active positive steps, for example, administering a contrast agent. Withdrawal of the rejection of claims 1-17 under 35 U.S.C. §101 is respectfully requested.

Rejection of Claims 1-17 Under 35 U.S.C. §102(b)

Claims 1-17 are rejected as being anticipated in view of Teifke et al., Chang et al., Grisvold et al., Kaiser et al., Pierce et al., Kenney et al., Helbich et al., Ranney, Brasch et al., and Hilger et al. This rejection is respectfully traversed

The rejection is premised on the asserted disclosures in the prior art regarding computerized tomography of the breast or MR imaging of the breast. Applicants' claimed method is directed to projection mammography. As described in the specification, CT and MR tomography are more highly sensitive to contrast media. See, e.g., the paragraph bridging pages 2-3 which also refers to the Teifke et al. and Grisvold et al. articles cited in the rejection. See also the discussion at page 4 concerning projection mammography and CT/MR tomographies. Further, see the discussion of the low radiation commonly used in projection mammography at, e.g., the bottom of page 5 and the middle of page 6.

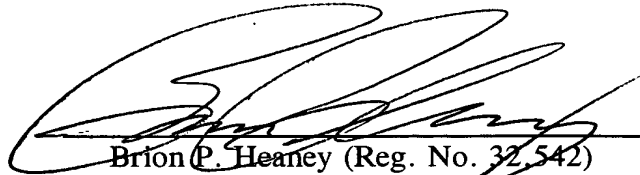
It is respectfully submitted that the rejection fails to set forth a sufficient basis for anticipation of the applicants' claimed invention of projection mammography. Withdrawal of the rejection under 35 U.S.C. §102(b) is respectfully requested.

Rejection of Claims 1-17 Under 35 U.S.C. §103

Claims 1-17 are rejected as being obvious in view of Teifke et al., Chang et al., Grisvold et al., Nitecki et al., Kaiser et al., Pierce et al., Kenney et al., Helbich et al., Ranney, Brash et al., Hilger et al., Kirpoitin et al., Platzek et al. This rejection is also respectfully traversed.

As in the §102(b) rejection, this rejection is premised on the asserted prior art disclosures regarding computerized tomography of the breast and MR imaging of the breast. The rejection fails to set forth sufficient motivation to modify the prior art disclosures so as to arrive at an embodiment in accordance with applicants' claimed method of projection mammography. Withdrawal of the rejection under 35 U.S.C. §103 is respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Brion P. Heaney', is written over a horizontal line.

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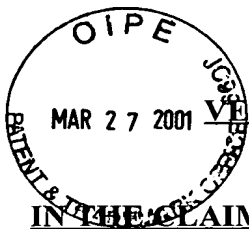
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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Please cancel claims 1-17.

Please add the following new claims:

-- 18. In a method of projection mammography comprising taking at least one mammogram of a patient, the improvement comprising administering to said patient an intravenous contrast agent to improve the contrast of said at least one mammogram.

19. A method of projection mammography according to claim 18, wherein said contrast agent is selected from:

- (a) an agent containing iodine as an opacifying agent;
- (b) an agent containing bromine as an opacifying agent;
- (c) a compound of an element of atomic number 34, 42, 44-52, 54-60, 62-79, 82 or 83; and
- (d) a chelate of an element of atomic number 56-60, 62-79, 82 or 83.

20. A method of projection mammography according to claim 19, wherein said intravenous contrast agent contains iodine as an opacifying element.

21. A method of projection mammography according to claim 19, wherein said intravenous contrast agent contains bromine as an opacifying element.

22. A method of projection mammography according to claim 19, wherein said intravenous contrast agent contains a compound of an element of atomic number 34, 42, 44-52, 54-60, 62-79, 82 or 83 as an opacifying element.

23. A method of projection mammography according to claim 19, wherein said intravenous contrast agent contains a chelate of an element of atomic number 56-60, 62-79, 82 or 83 as an opacifying element.

24. A method of projection mammography according to claim 18, wherein said intravenous contrast agent has a molecular weight of 10,000 to 80,000 D.

25. A method of projection mammography according to claim 18, wherein said intravenous contrast agent is integrated into a macromolecular structure.

26. A method of projection mammography according to claim 18, wherein said intravenous contrast agent is present in the form of liposomes, emulsion droplets, nanoparticles, or macroparticles, or is in a form whereby the agent is associated with another molecule.

27. A method of projection mammography according to claim 18, wherein said agent exhibits an x-ray opacity that corresponds to 100 mg of iodine/ml to 500 mg of iodine/ml.

28. A method of projection mammography according to claim 20, wherein said agent is administered at a concentration of 100 mg of iodine/ml to 500 mg of iodine/ml.

29. A method of projection mammography according to claim 20, wherein said agent is administered at a dose corresponding to 150 mg of iodine/kg to 1500 mg of iodine/kg of body weight.

30. A method of projection mammography according to claim 21, wherein said agent is administered at a concentration of 100 mg of bromine/ml to 500 mg of bromine /ml.

31. A method of projection mammography according to claim 20, wherein said agent is administered at a dose corresponding to 100 mg of bromine/kg to 1500 mg of bromine/kg of body weight.

32. A method of projection mammography according to claim 22, wherein said agent is administered at a concentration of 10 mmol-2 mol/l.

33. A method of projection mammography according to claim 22, wherein said agent is administered at a dose of 0.1-2 mmol/kg of body weight.

34. A method of projection mammography according to claim 23, wherein said agent is administered at a concentration of 10 mmol-2 mol/l.

35. A method of projection mammography according to claim 23, wherein said agent is administered at a dose of 0.1-2 mmol/kg of body weight.

36. A method according to claim 18, wherein a first mammogram is obtained, the patient is then administered said contrast agent, and then a second mammogram is obtained 30 seconds to 1 minute after administration of said contrast agent.

37. A method according to claim 20, wherein said contrast agent is meglumine diatrizoate, lysine diatrizoate, iothalamate, ioxithalamate, iopromide, iothexol, iomeprol, iopamidol, ioversol, iobitridol, iopentol, iotrolan, iodixanol, or ioxilan. --